

# *Telia Company Carbon and Energy Enablement Methodology - Summary*

*FY 2020*

## 1 Overview

This document provides a summary description of Telía Company's (hereafter referred to as Telía) carbon and energy enablement (hereafter referred to as enablement) model. The Carbon Trust have worked with Telía to create this MS Excel-based model that enables Telía to calculate the enablement impact of selected Telía products and services, using both generic enablement factors, as well as selected customer cases. The model calculates the annual enablement by some of Telía's products and service offerings, covering Telía's locations of operation - the Nordics (*Sweden, Norway, Finland, Denmark*) and the Baltics (*Estonia, Latvia, Lithuania*). For each product/service included in the analysis, the model is designed to calculate the annual CO<sub>2</sub>e avoided and energy saved through Telía's customers' use of certain products and services.

The overall approach to quantifying the enablement impact of some of Telía's products and services began with the initial identification of key solutions from the GSMA Enablement Effect report<sup>1</sup> which aligned with some of Telía's products and services. This resulted in the assessment of the following 10 initial solutions categories provided by Telía:

### *Smart buildings:*

- **HVAC Control** (commercial buildings)
- **Building Energy Management Systems** (electricity commercial)

### *Smart utilities:*

- **Smart Meters** (electricity residential)

### *Smart transportation:*

- **HGVs**
- **Buses**
- **Cars**
- **Usage based car insurance**

### *Remote meetings:*

- **Audioconferencing**
- **Videoconferencing**
- **Online Conferencing**

Telía intends to add more products and services to the model in the future.

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<sup>1</sup> [https://www.gsma.com/betterfuture/wp-content/uploads/2019/12/GSMA\\_Enablement\\_Effect.pdf](https://www.gsma.com/betterfuture/wp-content/uploads/2019/12/GSMA_Enablement_Effect.pdf)

## 2 Enablement Methodology

The enablement impact is calculated on a generic and customer specific basis. The generic enablement covers the included products across the Nordic and Baltic countries, using generic national-level enablement factors. Customer specific enablement impact is calculated for selected customer cases, where available.

### 2.1 Generic Enablement

Generic enablement impact is calculated using third party sources and data. The generic quantity (tCO<sub>2</sub>e or kWh) of enablement of each product/service per Unit of Measurement (UoM) is calculated by multiplying together the volume of product (i.e. UoM) by an enablement factor. This calculation is done on a country basis using national statistics, data and researched figures. For enablement solutions that result in avoiding travel, the equivalent litres of fuel savings have been calculated.

### 2.2 Customer Specific Enablement

The enablement impact for specific customer cases is calculated for certain Telio products. In these calculations, the customer's enablement factor is calculated separately, using actual measured data on energy savings and carbon reduction from the use of Telio's products compared to the *Business as Usual* scenario before the product's implementation. This customer specific enablement factor is then applied in the model and multiplied by the customer's actual volume of Telio's product/service to calculate the total enablement enabled by Telio, attributable to that specific customer case. Where appropriate, the customer specific enablement factor of one customer can be applied to the volume data of other customers. This would be appropriate where two customers share similar characteristics that would affect their carbon savings and energy consumption, e.g. similar size, similar location.

## 3 Enablement – 2020 summary

The table below outlines the enablement mechanism and overall generic enablement impact of Telio's products across the enablement categories included in the model. The table below has been used to calculate the enablement figures in Telio's 2020 Annual and Sustainability Report. See [annualreports.teliacompany.com](https://annualreports.teliacompany.com) for more information. Please note:

- For 2020, no customer specific cases have been included.
- The range of enablement represents the minimum to maximum enablement factors across the various countries.

For more detailed information about the methodology including assumptions and data sources, contact Telio Company at [group-sustainability@teliacompany.com](mailto:group-sustainability@teliacompany.com).

Enablement Category	Enablement Sub-Category	Enablement Mechanism	Unit of Measurement	Range of Carbon Enablement Factor (tCO <sub>2</sub> e/unit)	Range of Energy Enablement Factor (kWh or litres fuel/unit)
Smart buildings	HVAC Control (commercial buildings)	Monitoring and control of HVAC systems, including automatic reaction based on occupancy, leads to a reduction in energy consumption.	Number of offices with connected HVAC	0.085 – 1.681	1,568 kWh – 3,272 kWh

Smart buildings	Building energy management systems (electricity commercial)	Energy management systems lead to optimised energy and heating demand resulting in energy savings.	Number of connected BEMS systems	0.013 – 1.085	597 kWh – 1,447 kWh
Smart utilities	Smart meters (electricity residential)	Use of smart meters enables monitoring of electricity used, raises awareness, and leads to behaviour change, reducing electricity consumption and therefore emissions.	Number of residential smart electricity meters	0.004 – 0.067	59 kWh - 530 kWh
Smart transportation	Smart logistics - HGVs	Better routing and coordination of vehicle fleets, enabled through telematics systems connected via mobile networks in HGVs, results in the reduction of total distance travelled, avoiding areas of high congestion, optimising fuel usage and ultimately reducing emissions.	Number of connected HGVs	1.012 – 13.112	367 litres fuel - 4,750 litres fuel
Smart transportation	Smart logistics - Buses	Better routing and coordination of bus fleets, enabled through telematics systems connected via mobile networks in buses, results in the reduction of total distance travelled, avoiding areas of high congestion, optimising fuel usage and ultimately reducing emissions.	Number of connected buses	2.858 - 3.022	1,527 litres fuel – 1,615 litres fuel
Smart transportation	Smart logistics - Cars	Improvement of driver behaviour, enabled through telematics systems connected via mobile networks in cars, leading to reduced overall journey distance, fuel consumption and lower emissions.	Number of connected cars	0.116 – 0.331	35 litres fuel – 98 litres fuel
Smart transportation	Usage-based car insurance	Telematics (black box) in car collects data on driving behaviour, and rewards safe driving with lower insurance premiums. This leads to improved driving behaviour, reduced fuel consumption and reduced repairs due to accidents. All of which reduce emissions.	Number of connected cars	0.359 – 0.574	35 litres fuel – 98 litres fuel
Remote meetings	Audioconferencing	Use of audioconferencing to join conference calls reduces the need for business travel, thus reducing carbon emissions.	Audioconferencing minutes	0.00015	0.253 litres fuel
Remote meetings	Videoconferencing	Use of videoconferencing to join conference calls reduces the need for business travel, thus reducing carbon emissions.	Number of videoconference rooms	94.361	157,657 litres fuel
Remote meetings	Online conferencing	Use of collaborative online conferencing tools to join conference calls and work remotely reduces the need for business travel, thus reducing carbon emissions.	Number of subscribers	0.366	612 litres fuel